VISHNYAKOV, Valentin Vasil'yevich[Vyshniakov, V.V.]; BEZUGLYY, A.M. [Bezuhliy, A.M.], kand. geol.-miner. nauk, red.; SHPORTYUK, V.I., red.; GORBUNOVA, N.M.[Horbunova, N.M.], tekhn. red.

[Concised geological dictionary-handbook]Korotkyi geologichnyi slovnyk-dovidnyk. Za red. A.M.Bezuhloho. Kyiv, "Radians'ka shkola," 1962. 112 p. (MIRA 16:3)
(Geology--Dictionaries)

TIKHOMIROV, D.N., polkovnik med.sluzhby, zasluzhennyy vrach UkrSSR;
BEZUGLYY, A.Ye., polkovnik meditsinskoy sluzhby

Closed lesions and wounds other than gunshot in the abdomen and abdominal organs. Sbor.nauch.trud.Kiev.okruzh.voen.gosp. no.4:104-111 '62. (MIRA 16:5)
(VISCERA--WOUNDS AND INJURIES)

BEZUGLYY, A.Ye., polkovnik med.sluzhby; LOKHINA, I.F.; ROGOVA, Ye.A.

Clinical, roentgenological and morphological juxtaposition in chronic appendicitis. Sbor.nauch.trud.Kiev.okruzh.voen.gosp. no.4:131-134 '62. (MIRA 16:5)

(APPENDICITIS)

BEZUGLYY, A.Ye. (Kiyev, 105, prospekt Mira, 55, kv. 29); KOLESOV, V.D.

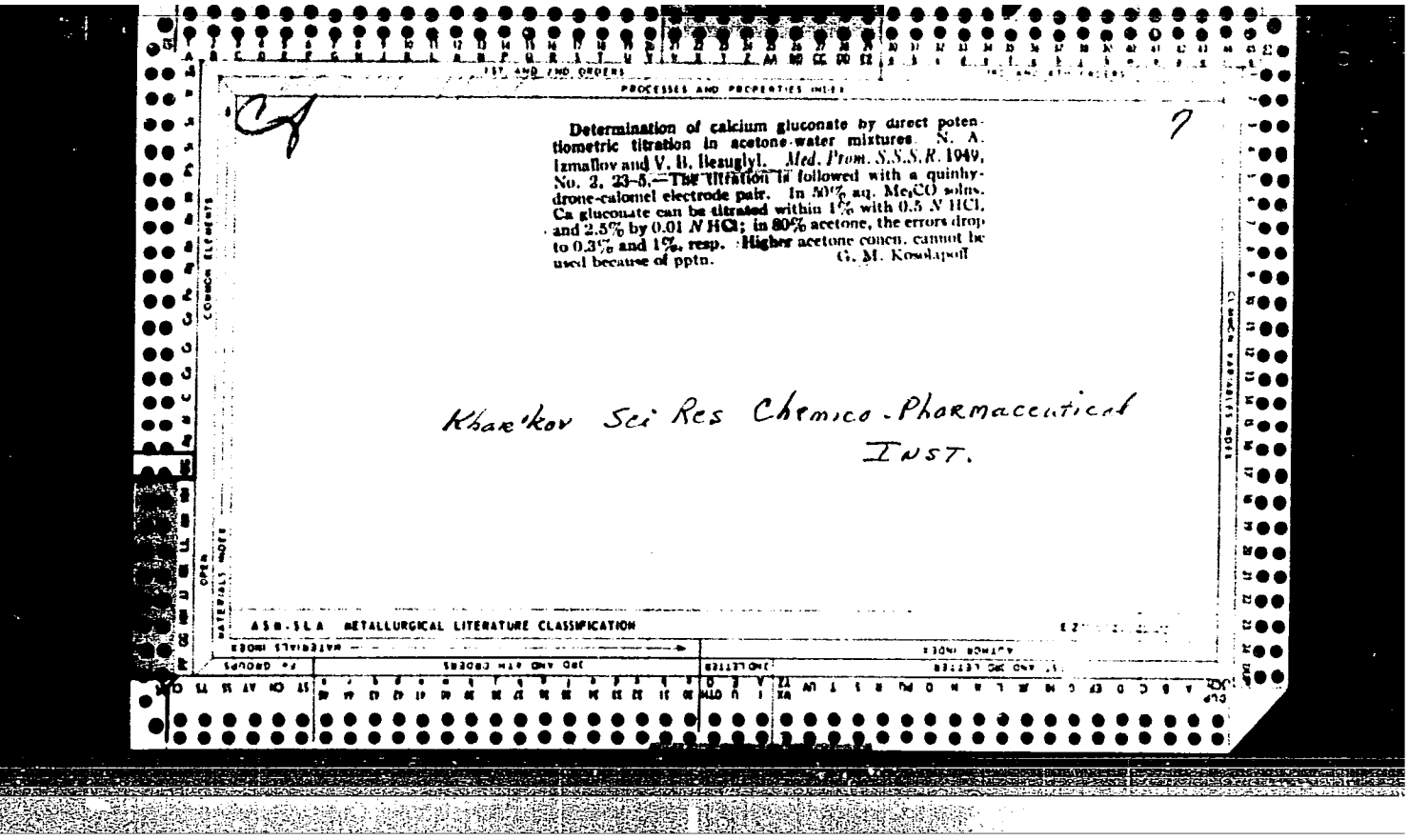
Experience in the clinical use of the UKL-60 apparatus in esophageal, gastric and intestinal surgery. Vest. khir. 92 no.1:79-81 Ja '65. (MIRA 17:11)

1. Iz voyennogo gospitalya, Kiyev.

BEZUGLYY, B.

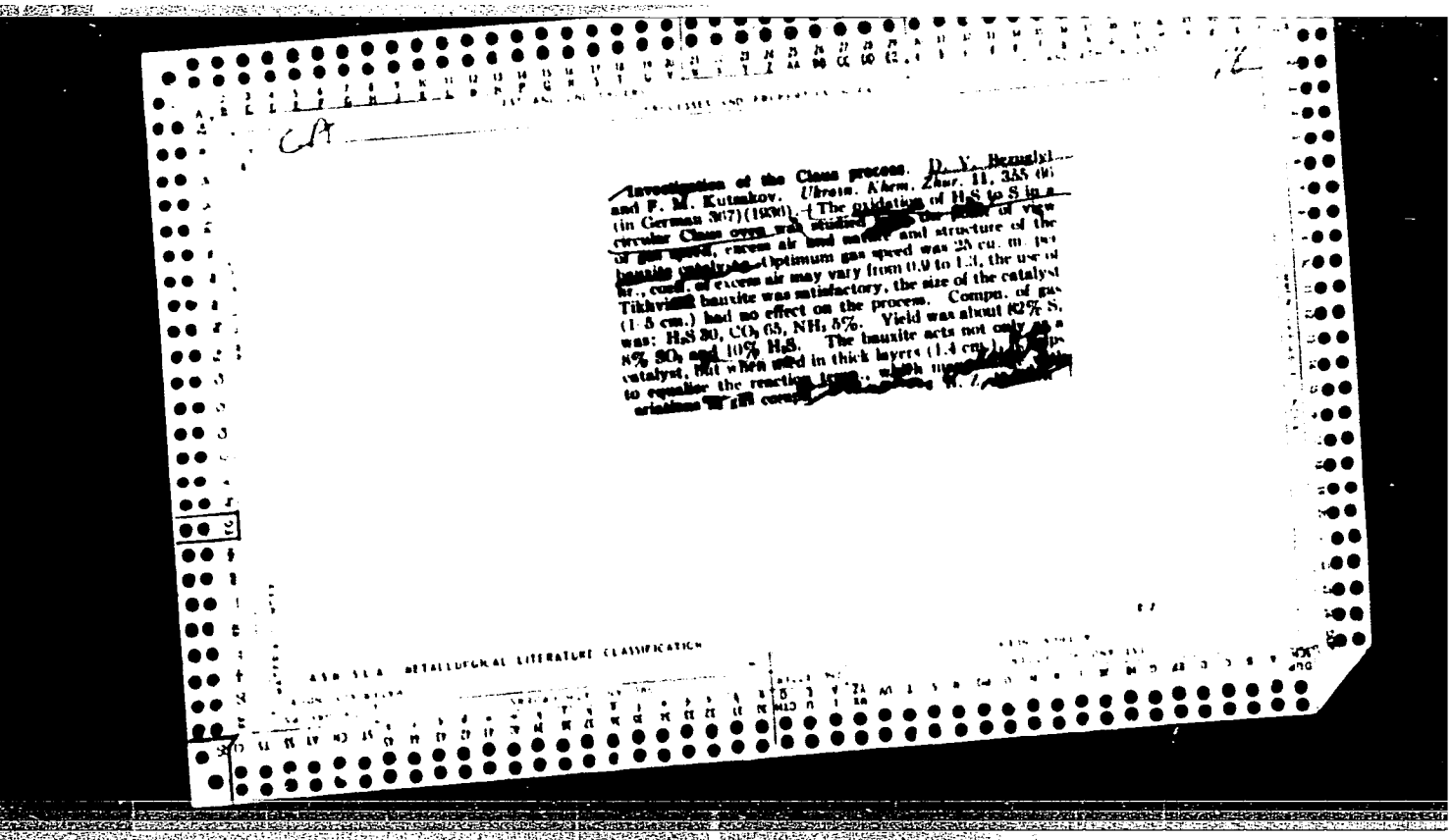
Verified by time. Fin.SSSR 37 no.1:72-73 Ja '63. (MIRA 16:2)

(Ukraine--Industrial procurement)

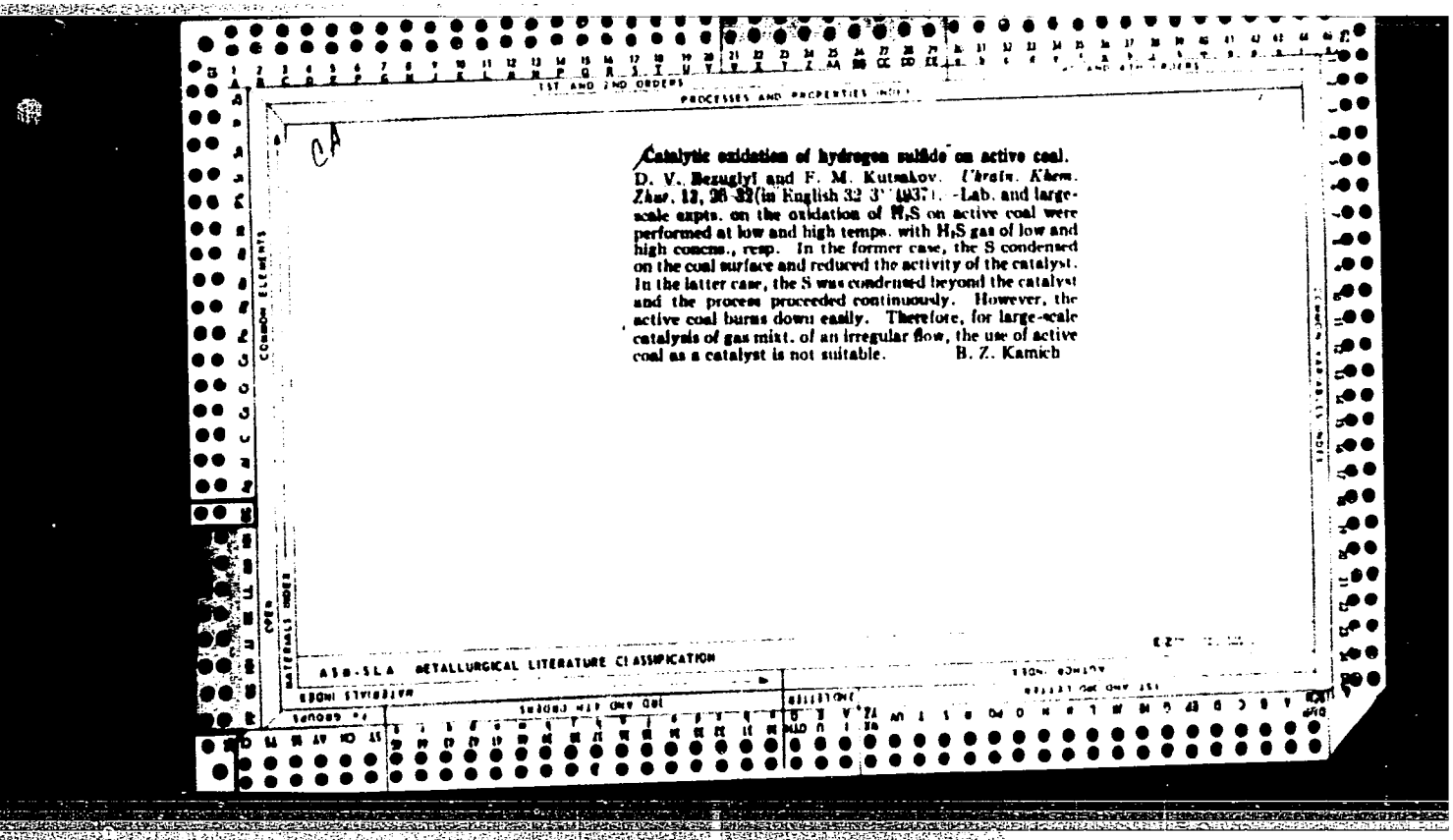


Determination of calcium gluconate by direct potentiometric titration in acetone-water mixtures. N. A. Izmailov and V. B. Ilesuglyi. *Med. Prom. S.S.S.R.* 1949, No. 3, 23–5.—The titration is followed with a quinhydrone-calomel electrode pair. In 50% aq. Me_2CO solns. Ca gluconate can be titrated within 1% with 0.5 *N* HCl, and 2.5% by 0.01 *N* HCl; in 80% acetone, the errors drop to 0.3% and 1%, resp. Higher acetone concn. cannot be used because of pptn. G. M. Kosolapoff

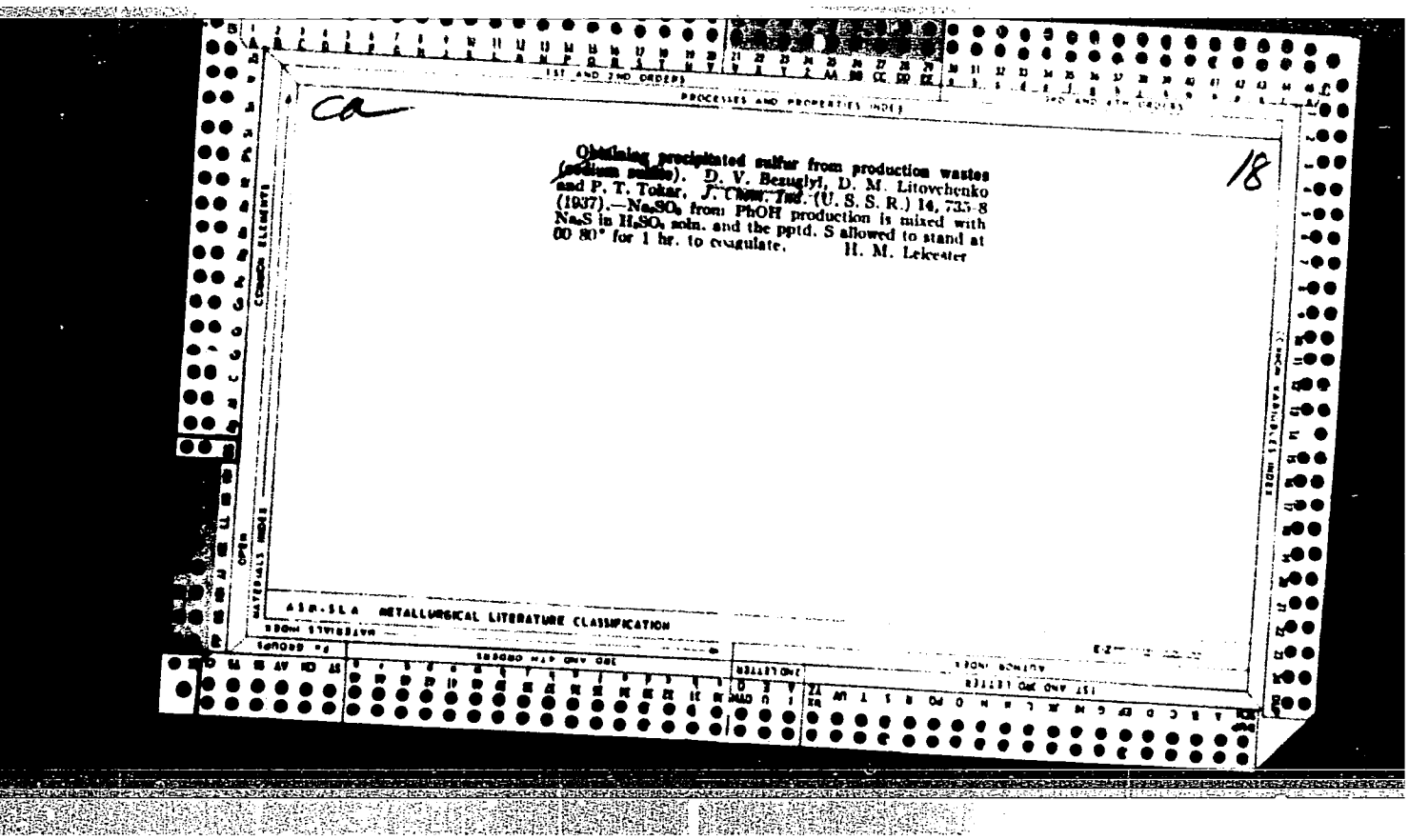
Kharkov Sci Res Chemico-Pharmaceutical Inst.



Investigation of the Claus process. D. V. Bezuglyi and P. M. Kutsakov. *Ukrain. Khem. Zhur.* 11, 385 (in German 307) (1936). The oxidation of H_2S to S in a circular Claus oven was studied. The effect of velocity of gas speed, excess air and moisture and structure of the bauxite catalyst. Optimum gas speed was 25 cu. m. per hr., cont. of excess air may vary from 0.9 to 1.1, the use of Tikhvinsk bauxite was satisfactory, the size of the catalyst (1-5 cm.) had no effect on the process. Compn. of gas was: H_2S 30, CO_2 65, NH_3 5%. Yield was about 82% S, 8% SO_2 and 10% H_2S. The bauxite acts not only as a catalyst, but when used in thick layers (1.4 cm.) helps to equalize the reaction temp., which must [illegible]



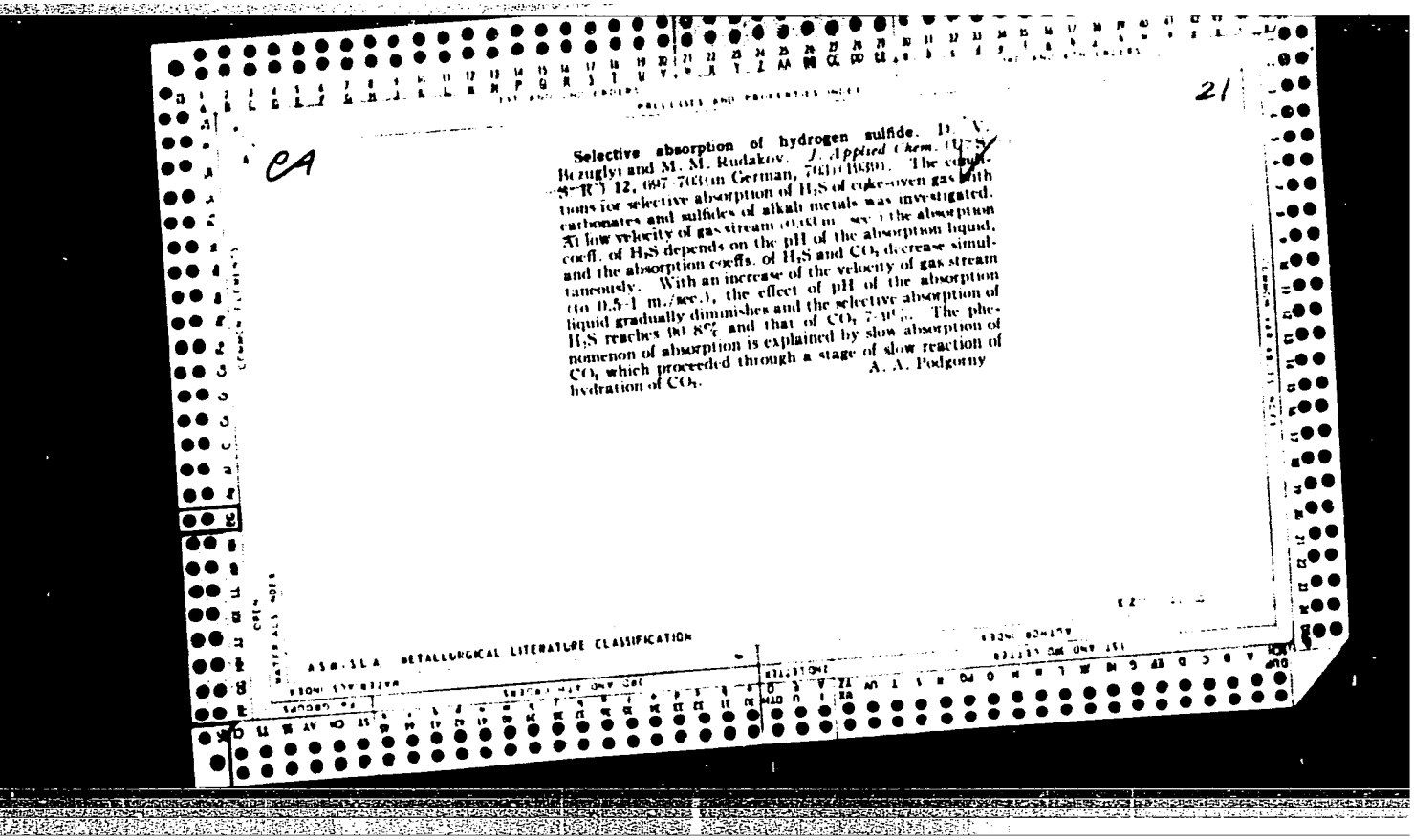
Catalytic oxidation of hydrogen sulfide on active coal.
D. V. Bezuglyĭ and F. M. Kutsakov. *Ukrain. Khem. Zhur.* 13, 26-32(in English 32 3" 1937). -Lab. and large-scale expts. on the oxidation of H_2S on active coal were performed at low and high temps. with H_2S gas of low and high concns., resp. In the former case, the S condensed on the coal surface and reduced the activity of the catalyst. In the latter case, the S was condensed beyond the catalyst and the process proceeded continuously. However, the active coal burns down easily. Therefore, for large-scale catalysis of gas mixt. of an irregular flow, the use of active coal as a catalyst is not suitable. B. Z. Kamich



Obtaining precipitated sulfur from production wastes (sodium sulfide). D. V. Bezuglyi, D. M. Litovchenko and P. T. Tokar. *J. Chem. Ind.* (U. S. S. R.) 14, 735-8 (1937).—Na_2SO_3 from PhOH production is mixed with Na_2S in H_2SO_4 soln. and the pptd. S allowed to stand at 80-90° for 1 hr. to coagulate. H. M. Leicester

18

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



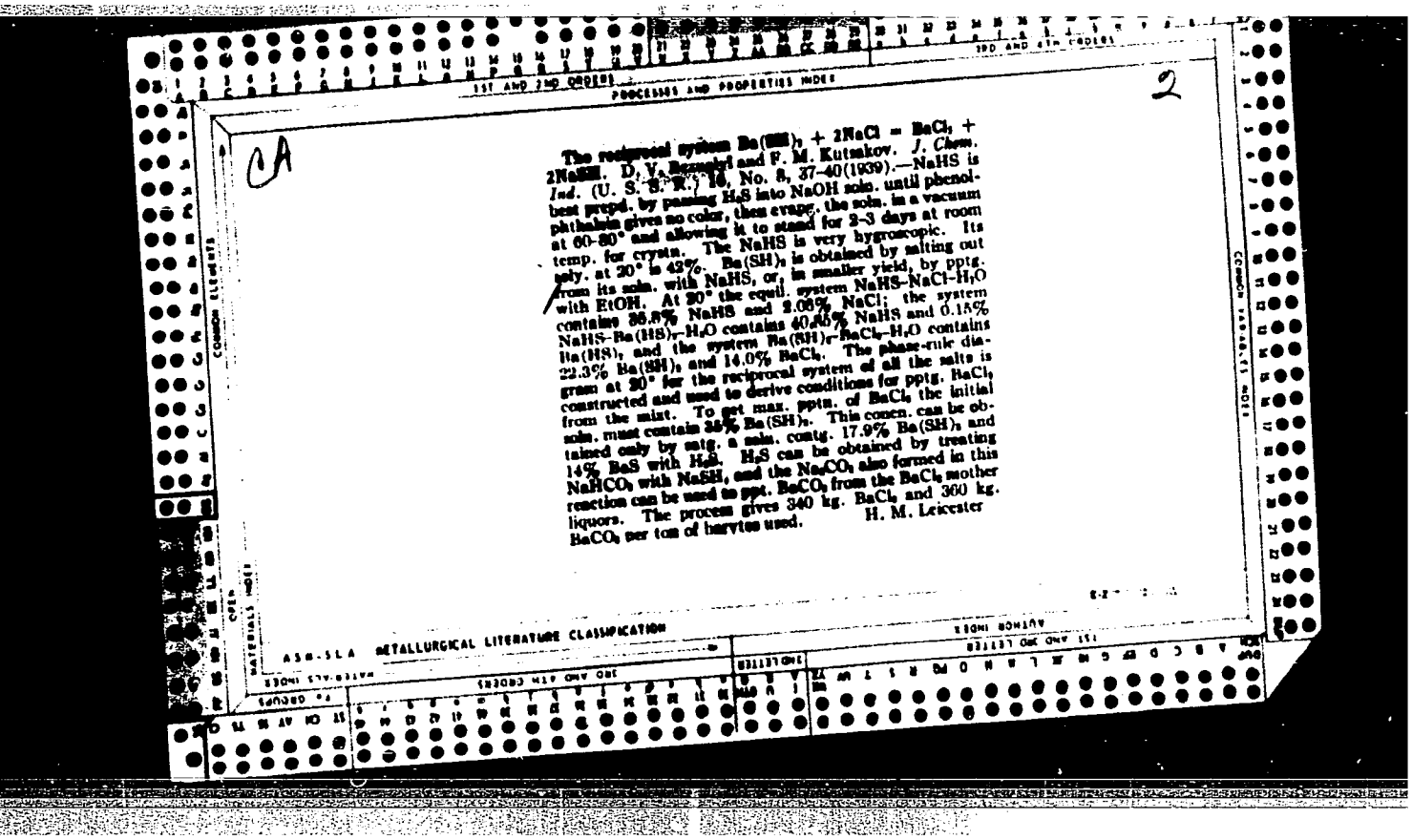
CA

21

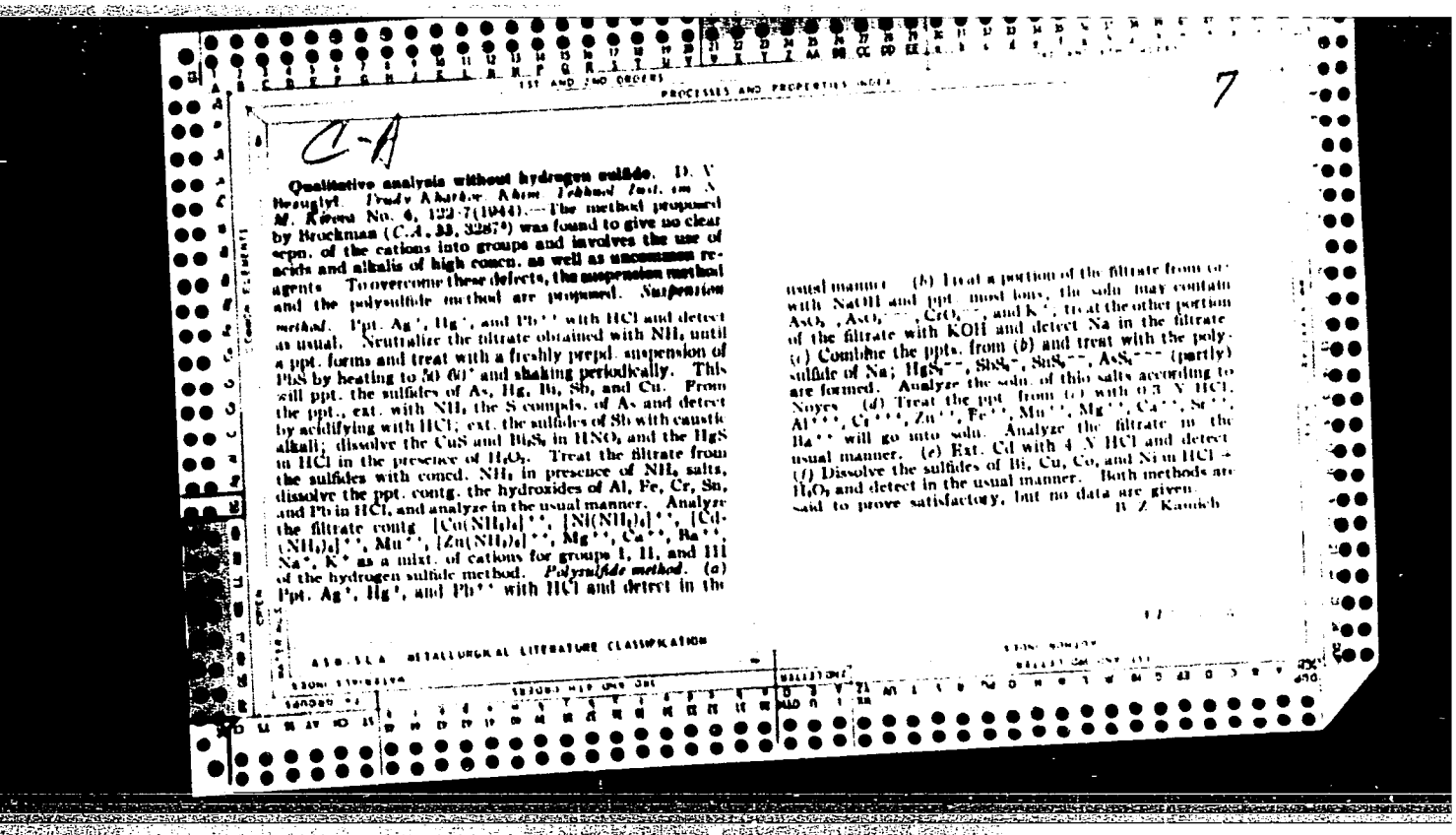
Selective absorption of hydrogen sulfide. D. V. Bezuglyi and M. M. Rudakov. *J. Applied Chem.* (U.S.S.R.) 12, 697-703(in German, 704)(1939). The conditions for selective absorption of H_2S of coke-oven gas with carbonates and sulfides of alkali metals was investigated. At low velocity of gas stream (0.05 m. sec.) the absorption coeff. of H_2S depends on the pH of the absorption liquid, and the absorption coeffs. of H_2S and CO_2 decrease simultaneously. With an increase of the velocity of gas stream (to 0.5-1 m./sec.), the effect of pH of the absorption liquid gradually diminishes and the selective absorption of H_2S reaches 90-95% and that of CO_2 7-10%. The phenomenon of absorption is explained by slow absorption of CO_2 which proceeded through a stage of slow reaction of hydration of CO_2.

A. A. Podgorny

A 50-SLA METALLURGICAL LITERATURE CLASSIFICATION



The reciprocal system $Ba(SH)_2 + 2NaCl = BaCl_2 + 2NaSH$. D. Ya. Rozovskiĭ and F. M. Kutsakov. *J. Chem. Ind.* (U. S. S. R.) 16, No. 8, 37–40(1939).—NaHS is best prepd. by passing H_2S into NaOH soln. until phenolphthalein gives no color, then evapg. the soln. in a vacuum at 60–80° and allowing it to stand for 2–3 days at room temp. for crystn. The NaHS is very hygroscopic. Its soly. at 20° is 42%. $Ba(SH)_2$ is obtained by salting out from its soln. with NaHS, or, in smaller yield, by pptg. with EtOH. At 20° the equil. system NaHS–NaCl–H_2O contains 36.8% NaHS and 2.06% NaCl; the system NaHS–$Ba(HS)_2$–H_2O contains 40.65% NaHS and 0.18% $Ba(HS)_2$, and the system $Ba(SH)_2$–$BaCl_2$–H_2O contains 22.3% $Ba(SH)_2$ and 14.0% $BaCl_2$. The phase-rule diagram at 20° for the reciprocal system of all the salts is constructed and used to derive conditions for pptg. $BaCl_2$ from the mixt. To get max. pptn. of $BaCl_2$ the initial soln. must contain 35% $Ba(SH)_2$. This concn. can be obtained only by satg. a soln. contg. 17.9% $Ba(SH)_2$ and 14% BaS with H_2S. H_2S can be obtained by treating $NaHCO_3$ with NaSH, and the $NaHCO_3$ also formed in this reaction can be used to ppt. $BaCO_3$ from the $BaCl_2$ mother liquors. The process gives 340 kg. $BaCl_2$ and 360 kg. $BaCO_3$ per ton of harytes used. H. M. Leicester



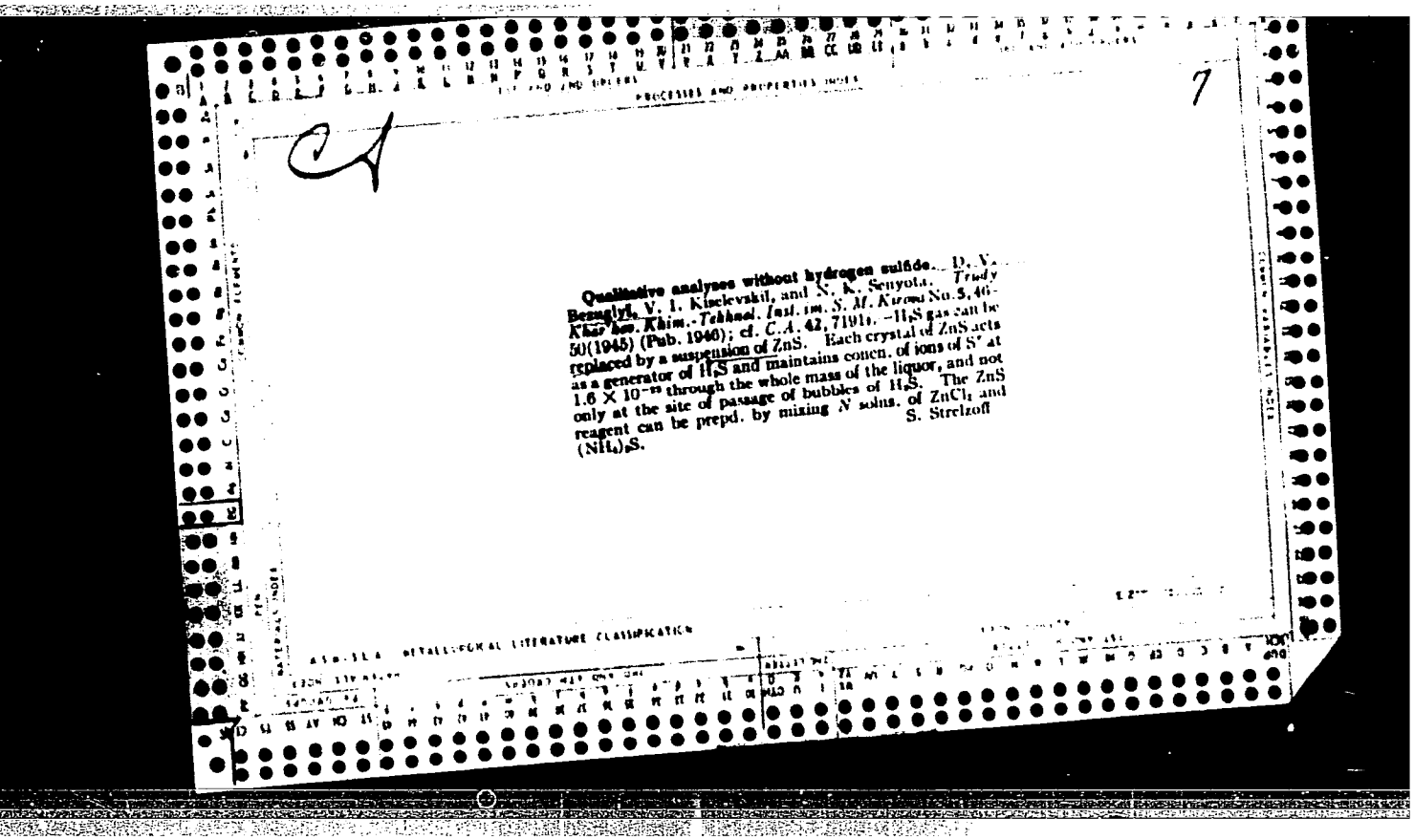
C-A

7

Qualitative analysis without hydrogen sulfide. D. V Nesaglyd. *Trudy Kharkov. Khim Tekhnol Inst. im S M. Kirova* No. 6, 122-7(1944).—The method proposed by Bruckman (*C.A.*, 33, 3287⁹) was found to give no clear sepn. of the cations into groups and involves the use of acids and alkalis of high concn. as well as uncommon reagents. To overcome these defects, the suspension method and the polysulfide method are proposed. *Suspension method.* Ppt. Ag^+, Hg^+, and Pb^{++} with HCl and detect as usual. Neutralize the filtrate obtained with NH_3 until a ppt. forms and treat with a freshly prepd. suspension of PbS by heating to 50-60° and shaking periodically. This will ppt. the sulfides of As, Hg, Bi, Sb, and Cu. From the ppt., ext. with NH_3 the S compds. of As and detect by acidifying with HCl; ext. the sulfides of Sb with caustic alkali; dissolve the CuS and Bi_2S_3 in HNO_3 and the HgS in HCl in the presence of H_2O_2. Treat the filtrate from the sulfides with concd. NH_3 in presence of NH_4 salts, dissolve the ppt. contg. the hydroxides of Al, Fe, Cr, Sn, and Pb in HCl, and analyze in the usual manner. Analyze the filtrate contg. $[Cu(NH_3)_4]^{++}$, $[Ni(NH_3)_6]^{++}$, $[Cd(NH_3)_4]^{++}$, Mn^{++}, $[Zn(NH_3)_4]^{++}$, Mg^{++}, Ca^{++}, Ba^{++}, Na^+, K^+ as a mixt. of cations for groups I, II, and III of the hydrogen sulfide method. *Polysulfide method.* (*a*) Ppt. Ag^+, Hg^+, and Pb^{++} with HCl and detect in the usual manner. (*b*) Treat a portion of the filtrate from (*a*) with NaOH and ppt. most ions, the soln. may contain AsO_3^{---}, AsO_4^{---}, CrO_4^{--}, and K^+, treat the other portion of the filtrate with KOH and detect Na in the filtrate. (*c*) Combine the ppts. from (*b*) and treat with the polysulfide of Na; HgS_2^{--}, SbS_4^{---}, SnS_3^{--}, AsS_4^{---} (partly) are formed. Analyze the soln. of this salts according to Noyes. (*d*) Treat the ppt. from (*c*) with 0.3 *N* HCl. Al^{+++}, Cr^{+++}, Zn^{++}, Fe^{++}, Mn^{++}, Mg^{++}, Ca^{++}, Sr^{++}, Ba^{++} will go into soln. Analyze the filtrate in the usual manner. (*e*) Ext. Cd with 4 *N* HCl and detect. (*f*) Dissolve the sulfides of Bi, Cu, Co, and Ni in HCl + H_2O_2 and detect in the usual manner. Both methods are said to prove satisfactory, but no data are given.

B. Z. Kamish

A S.T.M. METALLURGICAL LITERATURE CLASSIFICATION

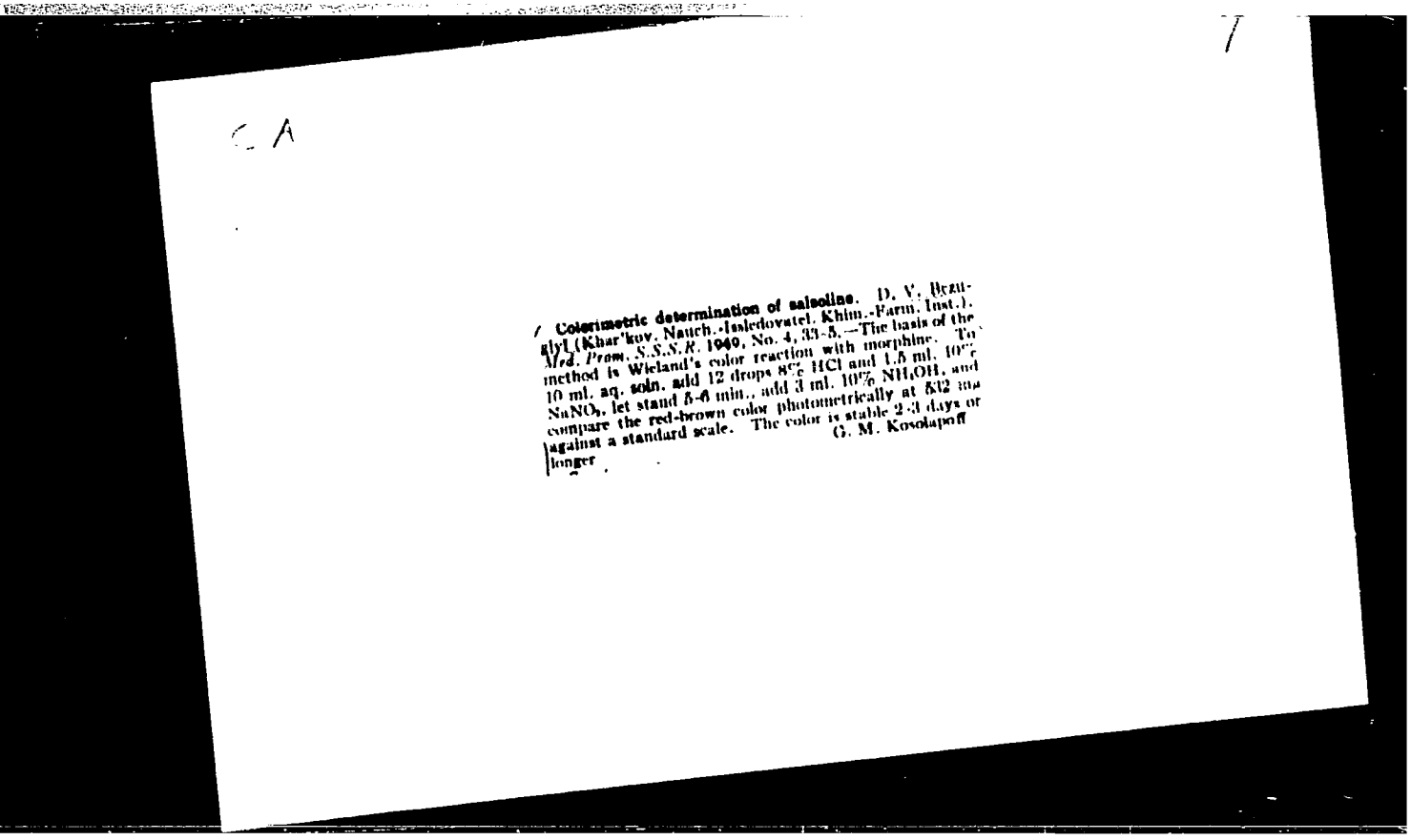


Qualitative analyses without hydrogen sulfide. D. V. Bezuglyĭ, V. I. Kiselevskiĭ, and N. K. Senyotina. *Trudy Khar'kov. Khim.-Tekhnol. Inst. im. S. M. Kirova* No. 5, 46-50 (1945) (Pub. 1946); cf. *C.A.* **42**, 7191i. H_2S gas can be replaced by a suspension of ZnS. Each crystal of ZnS acts as a generator of H_2S and maintains concn. of ions of S'' at 1.6×10^{-23} through the whole mass of the liquor, and not only at the site of passage of bubbles of H_2S. The ZnS reagent can be prepd. by mixing N solns. of $ZnCl_2$ and $(NH_4)_2S$. S. Strelzoff

CA

17

Application of the polarographic method for analysis of medicinals. D. V. Bezuglyi and Yu. V. Shostenko (Khar'kov. Nauch.-issledovatel. Khim.-Farm. Inst.). *Med. Prom. S.S.S.R.* 1949, No. 4, 7-13.—Review and discussion of principles. G. M. Kosolapoff



C A

7

Colorimetric determination of salsoline. D. V. Beauglyl (Khar'kov. Nauch.-Issledovatel. Khim.-Farm. Inst.). *Med. Prom. S.S.S.R.* 1940, No. 4, 33-5.—The basis of the method is Wieland's color reaction with morphine. To 10 ml. aq. soln. add 12 drops 8% HCl and 1.5 ml. 10% $NaNO_2$, let stand 5-6 min., add 3 ml. 10% NH_4OH, and compare the red-brown color photometrically at 512 mμ against a standard scale. The color is stable 2-3 days or longer.

G. M. Kosolapoff

BEZUGLYY, D. V.

Distr: 4E4j

Separation of cations by the precipitation chromatography method. D. V. Bezuglyĭ, I. A. Petrusevich, and N. K. Senyuta. *Trudy Khar'kov. Politekh. Inst.* 4, 111-13 (1951); *Referat. Zhur., Khim.* 1953, Abstr. No. 51782.—The possibility of sepg. Ag^+ and Fe^{+++} by pptn. chromatography is investigated. The adsorber with strongly activated surface is prepd. by agitating a pulp obtained by boiling cotton in 5% HNO_3 with finely powd. $Al(OH)_3$. Phosphate ions adsorbed by the carrier by passing Na hydrophosphate through it serve to ppt. the cations. It is shown that such a column completely exts. Ag^+ and Fe^{+++} from the soln. Further sepn. of Ag^+ and Fe^{+++} is achieved by dissolving the Ag^+ with 0.1 *N* AcOH at 70°. N. V.

Bezuglyy, D.V.

USSR/ Analytical Chemistry - Analysis of Inorganic Substances G-2

Abs Jour : Referat Zhur - Khimiya, No 4, 1957, 12125

Author : Bezuglyy D.V., Petrusevich I.A., Karlyuka T.N.
Inst : Khar'kov Polytechnic Institute
Title : Determination of Micro-Components of Tin-Free Bronzes

Orig Pub : Tr. Khar'kovsk. politekhn. in-ta, 1956, 8, 165-168

Abstract : For determination of Pb ($\sim$ 1 mg) in tin-free bronzes colorimetry is applied to a solution of I_2 in an organic solvent after separation of lead dioxide that is deposited at the anode. For determination of Sn is recommended the hematoxylin method; conditions have been worked out for the separation of Sn from interfering components. In determination of Sn it is separated by coprecipitation with MnO_2.

Card 1/1

Bezuglyy, D.V.

USSR/ Analytical Chemistry - General Questions G-1

Abs Jour : Referat Zhur - Khimiya, No 4, 1957, 11991

Author : Bezuglyy D.V., Borovshchuk M.P.
Inst : Khar'kov Polytechnic Institute
Title : Separation of Cathions by Ion-Exchange Method

Orig Pub : Tr. Khar'kovsk. politekhn. in-ta, 1956, 8, 169-175

Abstract : Equilibrium distribution of Cu^{2+} and Mn^{2+} ions between sulfonated coal and solution can be expressed by the Rothmund-Kornfeld equation, which indicates the heterogeneous nature of this ion-exchanger; in the state of equilibrium sulfonated coal is enriched with Cu, and the solution with Mn. Dynamic exchange capacity of sulfonated coal does not depend upon the concentration of the solution. It was ascertained that by the method of ion-exchange adsorption on sulfonated coal, it is possible to attain a concentration and enrichment of ion-exchanger with Cu, and also a partial separation of Mn.

Card 1/1

BEZUGLYY, D.V.; PETRUSEVICH, I.A.

Comparing methods for determining organic substances in aluminate solutions. Zav. lab. 24 no.12:1448-1449 '58. (MIRA 12:1)

1.Khar'kovskiy politekhnicheskiy institut imeni V.I. Lenina.
(Organic matter--Analysis)
(Aluminates)

AUTHOR: Bezugiy, D.V. SOV/81-32-2-4/56

TITLE: Production of Sodium Carbonate and Bicarbonate by Means of Ion Exchangers (Polucheniye karbonata i bikarbonata natriya pri pomoshchi ionoobmennikov)

PERIODICAL: Zhurnal prikladnoy khimii, 1959, Vol XXXII, Nr 2, pp 263-266 (USSR)

ABSTRACT: Ion exchange is used for many processes, e.g. the production of soda. The dynamics of the ion exchange is investigated here and formulae for its calculation are presented. Compounds used for the production of sodium carbonate and bicarbonate were studied in the paper. The data of the investigations (Table 1) shows that the principal dynamic factors are the height of the ion exchange zone in a testing column and the speed of the zone advancement in the column. The exchange of hydrogen ions by ammonium ions is most intensive in all investigated cationites of the mixed (sulfo-carbon) and sulfo-acid types. In experiment Nr 4 (Table 1) the height of the exchange zone was 16.29 cm, the speed of the zone 0,0026 cm/sec. Ammonium salts from the natural brine of Soviet salt lakes have been transformed into the corresponding sodium salts with a yield of 70%. L.A. Belo-

Card 1/2

Production of Sodium Carbonate and Bicarbonate by Means of Ion Exchangers

gorskaya, M.F. Kovaleva, N.Ye. Khomenko, and V.I. Lukashenko helped in the experiments.
There are 3 tables and 7 references, 3 of which are Soviet and 4 English.

ASSOCIATION: Khar'kovskiy politekhnicheskiy institut imeni V.I. Lenina (Khar'kov Polytechnical Institute Imeni V.I. Lenin)

SUBMITTED: July 15, 1957

S/075/61/016/006/001/006
B106/B147

AUTHORS: Amsheyeva, A. A., and Bezuglyy, D. V.

TITLE: Cerium determination in pig iron by titration with hydroquinone solution

PERIODICAL: Zhurnal analiticheskoy khimii, v. 16, no. 6, 1961, 683-687

TEXT: The authors developed a reliable and quick method for determining cerium in iron metals. It is based on the separation of cerium from other elements in the form of fluorides at a pH of 2-5, and on the rapid and exact titrimetric cerium determination with a hydroquinone solution. Two values were measured for the solubility product of CeF_3: $8.1 \cdot 10^{-16}$ (radiometrically) and $1.1 \cdot 10^{-15}$ (conductometrically) (Ref. 4. Weaver J. L., Purdi W. C., Anal Chim. Acta 20, 376 (1959)). The solubility of cerium fluoride was found to be $3 \cdot 10^{-5}$ moles/liter for pH 2, $1.2 \cdot 10^{-4}$ moles/liter for pH 1, and $1.1 \cdot 10^{-3}$ moles/liter for pH 0. The weighed-in portion of pig iron should contain 2-3 mg of cerium. Determination is carried out as follows: the weighed-in portion of pig iron

Card 1/3

Cerium determination in ...

(1-3 g, depending on the cerium content) is heated with 25 30 milliliters of HCl (1 : 1) until complete dissolution takes place. The precipitated carbon is filtered off. The volume of the filtrate together with the washing fluids should not exceed 50 milliliters. Then, 0.5 g of ascorbic acid for the reduction of trivalent iron and, subsequently 25 monia are added dropwise to the cold solution until precipitation s... Then, 0.5 g of sodium fluoride is added and the tightly closed v... shaken for 1 hr. The fluoride precipitate is filtered off and was... -5 times with hot water. The filter with the precipitate is in...erated and slightly annealed in a muffle furnace. 15 milliliters of sulfuric acid (1 : 4) is added to the residue and evaporated to eliminate hydrofluoric acid completely. The cooled residue is dissolved in 150 milliliters of water. Thereafter, 5 milliliters of sulfuric acid (density 1.84) and 10-25 milliliters of a 25% ammonium persulfate solution are added for cerium oxidation. The solution is boiled 5-7 min to remove the excess oxidizing agent completely. One drop of ferroine is added to the cooled solution and then titrated with a 0.005 M solution of hydroquinone in 1% sulfuric acid until a pink color appears. Titrimetric determination can be carried out with sufficient accuracy in the presence of lanthanum, neodymium and praseodymium. Trivalent iron and hexavalent

Cerium determination in ...

molybdenum do not disturb in amounts < 5 mg. Vanadates and chromates do disturb. The above determination of cerium takes 5-6 hr. By systematic statistical evaluation of the results obtained in the analysis of synthetic mixtures, the authors showed that the method is convenient and accurate. It is being applied to analyses of modified pig iron samples at the authors' laboratory. R. S. Volodarskaya (Ref. 6: Zavodsk. laboratoriya 19, 1160 (1953)) is mentioned. There are 5 tables and 10 references: 4 Soviet-bloc and 6 non-Soviet. The three references to English-language publications read as follows: Westwood W., Moum A., Analyst 73, 275 (1948); Jouden W. J., Analyt. Chem. 19, 946 (1947); Linnig F., Mandel J. and Peterson J., Anal. Chem. 26, 1102 (1954).

ASSOCIATION: Khar'kovskiy politekhnicheskiy institut (Khar'kov Polytechnic Institute). Zavod transportnogo mashinostroyeniya im. V. A. Malysheva (Plant for Transportation Machinery imeni V. A. Malyshev)

SUBMITTED: November 17, 1960

Card 3/3

BEZUGLYY, D.V.; AMSHEYEVA, A.A.

Determination of calcium in modified cast irons. Zhur.anal.khim. 17 no.9:1045-1051 D '62. (MIRA 16:2)

1. Lenin Kharkov Polytechnical Institute and Malyshev Transport Machine-Building Plant.
(Calcium--Analysis) (Cast iron--Analysis)

L 60900-65 EWT(l)/EWT(m)/EPF(c)/EWP(j)/T IJP(c) RM
ACCESSION NR: AR5017403 UR/0081/65/000/010/S074/S075

SOURCE: Ref. zh. Khimiya, Abs. 10S459

AUTHOR: Nagornaya, L. L.; Bezuglyy, V. D.

TITLE: Investigation of the photoluminescent and scintillation properties of certain organic compounds with conjugate bonds in solid plastic solutions

CITED SOURCE: Sb. Stsintillyatory i stsintillyats. materialy. Vyp. 3. Khar'kov, Khar'kovsk. un-t, 1963, 91-98

TOPIC TAGS: photoluminescence, scintillation, conjugate bond system

TRANSLATION: The photoluminescent and scintillation characteristics of a large number of organic compounds were investigated to determine the connection between the photoluminescent and scintillation and structural aspects of the compounds. Also the investigation was to determine the influence of the coupling effect and of the viscosity of the medium on the photoluminescent and scintillation characteristics. Aryl derivatives of 1, 2-ethylene, 1, 3-oxazole and 1, 3, 4-oxadiazole and also the phenanthryl derivatives of oxadiazole and the anthryl derivatives of ethylene were

Card 1/2

L 60900-65
ACCESSION NR: AR5017403

investigated. For the investigation 18 x 15 mm plastic scintillators were used. Measurements of scintillation effectiveness were made according to the average photocurrent of a FEU-29 photoelectronic multiplier upon irradiation with a radioactive source of Ag^{110} (~0.1 tons of Cu); the quantum yield of photoluminescence was measured with a SF-4 spectrophotometer. It was found that the greatest increase of the quantum yield of photoluminescence is observed upon increasing the conjugate chain through the introduction in the n-position of additional phenyl rings; compounds with such residues as phenanthryl and anthryl ones have a considerably lower quantum yield than the corresponding diphenyl derivatives. A correlation relation was established between the quantum yield values of fluorescent and scintillation effectiveness for various classes of compounds in about the same spectral area of sensitivity employing a photoelectronic multiplier. The effect of the viscosity of the medium on the photoluminescent indices of certain derivatives of ethylene was shown; it was established that increasing the viscosity of a medium leads to an increase of quantum yield of compounds with an open conjugate chain; views explaining these phenomena were expressed. N. L.

SUB CODE: OC, OP ENCL: 00

Card 2/2

BEZUGLYY, V.D.; ALEKSEYEVA, T.A.

Polarographic determination of monomers of 4-vinylbiphenyl and its derivatives in polymers and copolymers with styrene. Zhur. anal. khim. 18 no.2:261-266 F '63. (MIRA 17:10)

1. All-Union Scientific-Research Institute of Monocrystals, Scintillating Materials and Highly Pure Substances, Kharkov.

AMSHEYEVA, A.A.; BEZUGLYY, D.V.

Determination of bismuth in cast iron by a photometric or a complexometric method with xylenol orange. Zhur. anal. khim. 19 no. 1:97-101 '64. (MIRA 17:5)

1. Zavod transportnogo mashinostroyeniya imeni V.A.Malysheva i Politekhnicheskiy institut imeni Lenina, Khar'kov.

BEZUGLYY, D.V.; KHOMENKO, N.Ye.; LUKASHENKO, V.I.

Dynamics of ion-exchange adsorption of microcomponents in the presence of accompanying ions. Zhur. anal. khim. 19 no.3:276-281 '64. (MIRA 17:9)

1. Khar'kovskiy politekhnicheskiy institut imeni Lenina.

BEZUGLYY, V.D.; KHEYFETS, L.Ya.; PREOBRAZHENSKAYA, Ye.A.

Determination of anthraquinone and carbazole in anthracene by the polarographic method. Zhur. anal. khim. 19 no.11:1402-1406 '64. (MIRA 18:2)

1. All-Union Scientific-Research Institute of Monocrystals, Scintillating Materials and Specially Pure Chemicals, Kharkov.

DMITRIYEVA, V.K.; KONONENKO, L.V.; REZNOLYY, V.D.

Effect of structure on half-wave potentials of aromatic aldehyde anils. Teoret. i eksper. khim. 1 no.4:456-461 '65.
(MIRA 18:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut monokristallov, Khar'kov.

BEZUGLYY, V.D.; PONOMAREV, Yu.P.

Polarographic determination of organic compounds being reduced in the far negative region of potentials. Report 1: Polarography of alkyl-substituted styrenes. Zhur. anal. khim. 20 no.7:842-847 '65. (MIRA 18:9)

1. All-Union Scientific-Research Institute of Monocrystals, Scintillating Materials and Specially Pure Chemicals, Kharkov.

BEZUGLYY, I.P., kand.sel'skokhozyaystvennykh nauk; TITSKIY, I.Ya., kand.selskokhozyaystvennykh nauk.

Brewer's yeast increases butterfat percentage in cows. Zhivotnovodstvo 19 no.12:36-40 D '57. (MIRA 10:12)

1.Ternopol'skaya oblastnaya sel'skokhozyaystvennaya opytnaya stantsiya.
(Cows--Feeding and feeding stuffs)
(Yeast)

B5361
S/056/63/044/001/015/067
B108/B180

24.7000

AUTHORS: Bezuglyy, N. A., Galkin, A. A., Pushkin, A. I.

TITLE: Magneto-acoustic oscillations and the Fermi surface in aluminum

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 44, no. 1, 1963, 71 - 79

TEXT: The anisotropy of the magneto-acoustic oscillations in aluminum was studied by a method described by A. A. Galkin, A. P. Korolyuk, PTE, 6, 199, 1960, to get information of the Fermi surface (V. L. Gurevich, ZhETF, 37, 71, 1959). Small aluminum disks were examined at 4.2°K at ultrasonic frequencies of 183 and 223 Mcps in magnetic fields of up to 2500 oe. The sound wave vector was directed along the principal crystallographic axes [110], [100], [111]. The results showed the shape and dimensions of the second zone to be in good agreement with the Fermi surface proposed by W. A. Harrison (Phys. Rev., 116, 555, 1959; 118, 1882, 1960; 118, 1190, 1960) who used the model of almost free electrons. They also show that there are no sharp intersections on the surface of the second zone. In a previous paper (ZhETF, 42, 84, 1962), slower magneto-

Card 1/2

acoustic oscillations were observed. A study of their anisotropy may throw light upon the structure of the third zone. There are 9 figures.

ASSOCIATION: Fiziko-tekhnicheskiy institut nizkikh temperatur Akademii nauk Ukrainskoy SSR (Physicotechnical Institute of Low Temperatures of the Academy of Sciences Ukrainskaya SSR)

SUBMITTED: July 21, 1962

BEZUGLYY, N.F.

Automatic protection by signaling of dangerous sections and work sites. Put' i put.khoz. 8 no.4:40-42 '64. (MIRA 17:4)

1. Glavnyy inzh. Novosigirskogo otdeleniya Zapadno-Sibirskoy dorogi.

BEZUGLYY, P. A.

USSR/Physics - Superconductivity Nov 50

"Certain Peculiarities of the Transition to the Superconducting State, II," A. A. Galkin, B. G. Lazarev, P. A. Bezugly, Physicotech Inst, Acad Sci Ukrainian SSR

"Zhur Eksper i Teoret Fiz" Vol XX, No 11, pp 987-994

Uses independent methods to determine velocity of displacement of boundary between normal and superconducting states (v is about 1,000 cm/sec). Shows this velocity differs when superconductivity is disrupted by constant and variable magnetic fields. Submitted 30 Mar 50.

PA 169T101

4

CA BEZUGLYY, P. A.

Disturbance of superconductivity by an alternating current. A. A. Galkin and P. A. Bezuglyĭ (Acad. Sci. Ukr. S.S.R., Kiev.) *Zhur. Eksp. Teoret. Fiz.* 20, 1145-6 (1950).—With an a.c. of amplitude I_0 superimposed on a d.c. of intensity I_D, if $I_0 + I_D < I_c$ (crit. current intensity), the p.d. V on the sample is zero. With $I_0 > I_c - I_D$, V increases with I_0, reaches a max., V_m, at $I_0 = I_c + I_D$, and then, as the neg. half-wave begins to take part in the disturbance of the supercond., V decreases with further increasing I_0, tending to the limit V_∞. At liquid He II temps., V_m decreases with increasing frequency ν. The contrary observations of Serin, Feldmeier, and Garfunkel (*Phys. Rev.* 76, 107(1949)) at higher ν (more than 20,000 cycles per sec.) can be explained by improved thermal insulation at higher ν, and more nearly adiabatic transition. This point of view is corroborated by an expt. with 2 halves of a Sn rod, one half left in its glass envelope, the other half with the glass tube etched away. The latter shows $V_m - V_\infty$ const. as a function of ν up to 20,000 cycles per sec., whereas with the former, that ratio is const. only up to $\nu = 2000$, then increases with further increasing ν up to $\nu = 10{,}000$; further increase of ν produces no further change in V_m. Evidently, from $\nu = 2000$ upwards, not all the heat absorbed or evolved in the superconductive transition is dissipated during a time distinctly shorter than the period of the a.c. At $\nu \sim 10^4$, the sample appears to be completely insulated.

N. Thon

BEZUGLYY, P. A.

USSR/Physics

Card 1/1

Authors : Galkin, A. A. and Bezuglyy, P. A.

Title : Frequency dependence of surface resistance isotherms of super-conductors

Periodical : Dokl. AN SSSR, 97, Ed. 2, 217 - 219, July 1954

Abstract : Experiments were conducted to determine the frequency dependance of surface resistances of super-conductors. An expression for $\frac{Rs}{Rn}$ was derived and compared with experimental data. Nine references. Graphs.

Institution : ...

Presented by : Academician I. K. Kikoin, March 23, 1954

BEZUGLYY, P.A.

USSR.

537.312.62

7975. The kinetics of destruction of superconductivity by a magnetic field. A. A. GALKIN AND P. A. BEZUGLYI. *Zh. eksper. teor. Fiz.*, 28, No. 4, 463–70 (1955) In Russian.

A superconducting tin or mercury cylinder was the core of a mutual inductance and the e.m.f. across the secondary was studied oscillographically in the presence of various steady magnetic fields for various amplitudes of the primary alternating field (such that the total field was above critical for part of each cycle) and for various frequencies. From the results it is deduced in agreement with Lifshitz's theory [Abstr. 1016 (1952)] that the velocity of displacement of the boundary between superconducting and normal phases varies as ω/σ (σ = conductivity) but that the depth of destruction of superconductivity varies rather more rapidly with the excess of field over the critical than is predicted by the theory. It is estimated that the time of creation of a normal nucleus is $<10^{-6}$ sec but the time of creation of a superconducting nucleus is $\sim 1{\cdot}5 \times 10^{-4}$ sec.

D. SHOENBERG

62 (1)

GALKIN, A.A.; BEZUGLYY, P.A.

Calorimetric investigations on the absorption of high-frequency fields by superconductors. Uch.zap. KHGU 64 no.6:175-182 '55. (MLRA 10:7)

(Superconductivity)

"APPROVED FOR RELEASE: 06/08/2000 CIA-RDP86-00513R000205210016-4

BEZUGLYY, P.A.

[illegible] surface resistance in the superconducting state [illegible] 3×10^{9} hertz [illegible] *Doklady Akad. Nauk* [illegible] 49, 121-5 [illegible] where R_n and [illegible]

[illegible] between R_s and R_n should disappear, and that such critical frequency, found by extrapolation, is around 10^{11} Mc. [illegible] of such frequencies [illegible] measurement [illegible] found the conclusion, which can be explained by a rise in the effective penetration depth. W. M. Sternberg

APPROVED FOR RELEASE: 06/08/2000 CIA-RDP86-00513R000205210016-4"

BEZUGLIY, P.A.

GALKIN, O.O.; BEZUGLIY, P.A.

New method for the determination of the topography of high frequency fields in hollow-space oscillators. Ukr.fiz.shur. 1 no.4:382-388 O-D '56. (MLRA 10:2)

1. Fiziko-tekhnichniy institut AN USSR, Kharkiv.
(Stilbene--Optical properties) (Dichroism)

BEZUGLYY, P.A.

21-5-3/26

AUTHORS: Bezuglyy, P.A. (Bezuhlyy, P.A.) and Galkin, O.O. (Halkin, O.O.)

TITLE: On the Absorption by Superconducting Tin of Electromagnetic Radiation of Frequencies 8.3×10^{10} and 11.1×10^{10} cycles (O pogloshchenii sverkhprovodyashchim olovom elektromagnitnogo izlucheniya chastoty 8.3×10^{10} i 11.1×10^{10} gerts)

PERIODICAL: Dopovidi Akademii Nauk Ukrains'koi RSR, 1957, Nr 5, pp. 436-438 (USSR)

ABSTRACT: The temperature-dependence of the ratio $\frac{R_s(T)}{R_n}$ (where R_s is surface resistance in the superconducting state and R_n is surface resistance in the normal state) in a tin sample was studied at frequencies of 8.3×10^{10} and 11.1×10^{10} cps. The range of temperatures employed was from 1.5° to 4°K. The sample was a tin single crystal polished by the electrolytic method. Its purity was 99.999%. The results of measurements are shown in the figure of the article where the values of the ratio are represented by ordinates and absolute temperatures by abscissae. These data show that at the frequencies used, the difference between R_s and R_n is preserved, decreasing with the rise of frequency. Inasmuch as surface resistance does not approach zero at temperatures approximating

Card 1/2

Bezug'lyy P. A.

AUTHORS: Bezug'lyy, P. A., Gal'kin, A. A., 56-4-5-

TITLE: The Cyclotron Resonance in Tin at a Frequency of 9300 mc (Letter to the Editor) (Tsiklotronnyy resonans v olove pri chastote 9300 mgts)

PERIODICAL: Zhurnal Eksperim. i Teoret. Fiziki, 1957, Vol. 33, Nr 4 (10), pp. 1077-1078, (USSR)

ABSTRACT: In a magnetic field that runs exactly parallel to the surface of a metal sample it is possible that a cyclotron resonance occurs. In order to prove the existence of the latter the dependence of the active portion of the surface resistance of a tin sample on the field intensity of a constant magnetic field at 9300 MHz was experimentally taken. The tin sample consisted of a 0,8 mm thick, electropolished, monocrystalline wire in which the fourth order axis conincided with an accuracy up to 5° with the axis of the wire. The sample was placed in a coaxial copper resonator. The measurements were made at 4,20K and 2°K. From the resulting curves it may be seen that a monotonous decline of the resistance is to be observed in fields larger than 4000 Oe. At H_1 = 3600 and H_2 = 900 Oe, 2 resonance minima were noticed. At the lower temperature the minima emerge more clearly. At the same time, however, they lift somewhat toward the side of the field intensity. A rotation of the sample by 90° opposite the constant magnetic field furnishes almost the same results. These data are in good agreement with other experimental results. There are 4 Slavic references.

Card 1/2

AUTHORS: Bezuglyy, P. A., Galkin, A. A. 56-1-40/56

TITLE: The Cyclotron Resonance in Lead at a Frequency of 8900 Megacycles. (Tsiklotronnyy rezonans v svintse pri chastote 8900 mggts)

PERIODICAL: Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, 1958, Vol. 34, Nr 1, pp. 236-237 (USSR)

ABSTRACT: The present paper shortly reports on the results of the experiments made on the observation of the cyclotron--resonance of lead at 8900 megacycles. At first the reasons for the selection of lead as test-object are given. A monocrystalline lead wire, ~ 12 mm in length and ~0,8 mm in diameter, served as sample. A coaxial copper resonator was fastened along the axis. The surface resistance of the sample was investigated by the same method as employed by the same authors in the investigations of the cyclotron--resonance in tin (reference 3). The results of the measurements of R(H)/R(1300) in lead at the frequency of 8900 megacycles at the temperatures 4,2°K and 2°K are given in a diagram. R(H) signifies the surface resistance in a constant field with more than 1300 oersted field strength.

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The Cyclotron Resonance in Lead at a Frequency of 8900 Megacycles 56-1-40/56

This diagram clearly shows the important influence exerted by the relaxation time of the electrons upon this phenomenon. At 4,2°K only a monotonous decrease in the resistance with increasing field strength is observed, but at 2°K and H ~ 2400 oersted a fairly low resonance-minimum exists. After this minimum follows a maximum and then the surface resistance rapidly decreases in agreement with the forecast of theory. In lead (just as in tin) the main groups of the electrons supposedly are responsible for the cyclotron resonance. There are 1 figure and 6 references, 4 of which are Slavic.

ASSOCIATION: Physical-Technical Institute AN Ukrainian SSR (Fiziko-tekhnicheskiy institut Akademii nauk Ukrainskoy SSR)

SUBMITTED: October 5, 1957

AVAILABLE: Library of Congress

Card 2/2

AUTHORS: Bezuglyy, P. A., Galkin, A. A.

TITLE: An Investigation of the Surface Resistance of Tin in Weak Magnetic Fields (Issledovaniye poverkhnostnogo soprotivleniya olova v slabykh magnitnykh polyakh)

56-1-41/56

PERIODICAL: Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, 1958, Vol. 34, Nr 1, pp. 237-238 (USSR)

ABSTRACT: The authors investigated this surface resistance at field strengths up to 100 oersted with a method already described earlier (reference 3). The results of these experiments at a frequency of 9300 mega-cycles and a temperature of 4,2°K are here illustrated in a diagram. In agreement with the forecast of theory the active resistance of the metal at field strengths up to 10 oersted is practically independent on the field strength, i. e. at $H \to 0$ applies $dR/dH \to 0$. When $H > 10$ oersted the surface resistance monotonously decreases with increasing field strength. In measurements of the temperature dependence of R_s/R_n in semiconductors it has to be reckoned with the dependence of the surface resistance of metals on the strength of the magnetic field. In this connection R_s and R_n signify the surface resistances

Card 1/2

An Investigation of the Surface Resistance of Tin in Weak Magnetic Fields 56-1-41/56

of the metal in the superconducting and in the normal state respectively. A disregarding of this fact would lead to increased values of R_s/R_n. There are 1 figure and 3 references, all of which are Slavic.

ASSOCIATION: Physical-Technical Institute AN Ukrainian SSR (Fiziko-tekhnicheskiy institut Akademii nauk USSR)

SUBMITTED: October 5, 1957

AVAILABLE: Library of Congress

Card 2/2

24 (1)

AUTHORS: Bezuglyy, P. A., Galkin, A. A. Korolyuk, A. P. SOV/56-36-6-61/66

TITLE: The Anisotropy of the Absorption Coefficients of Ultrasonics in Superconductors (Anizotropiya koeffitsiyentov pogloshcheniya ul'trazvuka v sverkhprovodnikakh)

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1959 Vol 36, Nr 6, pp 1951 - 1952 (USSR)

ABSTRACT: By the investigation of the absorption of ultrasonics in superconductors it is possible to determine the size of the energy slit at T = 0 as well as the dependence of the slit width (ε_o) on temperature. The experiments carried out in this connection are in agreement with theory. By means of experiments also the influence exercised by the isotope composition and the homogeneous lattice deformation upon T_k and on the width of the slit was investigated. It may be imagined that lattice anisotropy leads to more visible results than isotopic composition. In the present "Letter to the Editor" experimental results concerning the absorption of ultrasonics (frequency 70 kilocycles) in superconductive and normal media are published. (Determina-

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tion of the absorption coefficient in the C_2- and C_4-axis of a spherical tin sample). The results, which were dealt with by the method developed by Bardeen, Cooper and Schrieffer (Ref 4) are shown in a table. It was found that the temperature dependence of the ratio of the absorption coefficient α_s/α_n is different in the two directions. The case of sound propagation along the C_4-axis agrees better with the isotropic theory of superconductivity. There are 1 table and 4 references, 1 of which is Soviet.

ASSOCIATION: Fiziko-tekhnicheskiy institut Akademii nauk Ukrainskoy SSR (Physico-technical Institute of the Academy of Sciences, Ukrainskaya SSR)

SUBMITTED: April 7, 1959

BEZUGLYY, P.A.

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S/056/60/039/01/01/029
B006/B070

AUTHORS: Bezuglyy, P. A., Galkin, A. A., Korolyuk, A. P.

TITLE: Investigation of the Anisotropy of the Energy Gap in Superconducting Tin

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960, Vol. 39, No. 1 (7), pp. 7-12

TEXT: The authors investigated the temperature dependence of the ultrasonic absorption coefficient in different directions of single crystals of superconducting tin. They describe the methods of investigation and present the results. The method of energy gap investigation is based on the determination of the difference between the curves $\alpha_s/\alpha_n = f(T)$ when the ultrasonics is propagated along a binary (C_2) and a tetragonal crystal axis. From this difference the anisotropy of the energy gap may be determined. α_s and α_n are the electronic ultrasonic absorption coefficients in the superconducting and the normal state respectively. They are related to the width $2\varepsilon_o$ of the energy gap by

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Investigation of the Anisotropy of the Energy Gap in Superconducting Tin

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B006/B070

the relation $\alpha_s/\alpha_n = 2/(e^{\varepsilon_0/kT} + 1)$. To investigate the influence of the lattice anisotropy on the energy spectrum of electrons in a semiconductor, the temperature dependence and absorption coefficients of longitudinal supersonics was investigated by means of an apparatus described here in detail. Fig. 1 shows a block diagram of the measuring device. The generator works at 70 Mc/sec, the quartz emitter receives 2500-3000 pulses per second for a duration of $(1 \div 1.5)\cdot 10^{-6}$ sec. A small sphere of single crystals of tin was used as a sample. It had a diameter of 13-15 mm, and on it, cut surfaces of 5-6 mm diameter perpendicular to the crystallographic axes were produced by electrocorrosion. Onto these surfaces quartz emitters and receivers were cemented in vacuum and on them small plates of brass of 5-6 mm diameter and a thickness of 0.2-0.3 mm. For very pure crystals of tin the condition that the mean free path of the electrons be large in comparison to the ultrasonic wavelength was very well fulfilled at helium temperature. The temperature dependence of ultrasonic absorption coefficients was measured simultaneously in two different directions at temperatures down to $1^{\circ}K$. Fig. 2 shows the Dewar for helium in which the measurements were carried out.

Investigation of the Anisotropy of the Energy Gap in Superconducting Tin

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The temperature of the sample was determined from the saturation vapor pressure of helium. The results are shown in diagrams. Fig. 3 shows α_s/α_n between 1° and 4°K taken along two mutually perpendicular C_2 axes. The measured values (full and empty circles) all lie on one line which shows that the physical properties are the same in the two directions. Fig. 4 shows the same for C_2 and C_4 axes. Here the anisotropy of the energy gap is clearly seen. Measurements made on two samples gave uniform results. For the absolute value of the electronic part of the ultrasonic absorption coefficients in the normal state in the neighborhood of T_c, the following results are obtained: $\alpha_n = (47.6 \pm 0.2)$ decibel/cm - (C_2), and $\alpha_n = (21.4 \pm 0.2)$ decibel/cm - (C_4). Fig. 5 shows $\log(\alpha_s/\alpha_n) = f(T_c/T)$. From the slope of the straight line portion of the curve, the energy gap width at absolute zero may be determined to be $(3.5 \pm 0.2)kT_c$ for the C_2-axis and $(3.1 \pm 0.1)\ kT_c$ for the C_4-axis. Besides the anisotropy in the temperature dependence of the absorption coefficients, an anisotropy

Investigation of the Anisotropy of the Energy Gap in Superconducting Tin

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of the transition temperature T_c is also established. For the C_2-axis T_c lies about 0.004°K higher than for the C_4-axis. The authors thank A. I. Berdovskiy and E. I. Ponomarenko for cooperation in the measurements and V. L. Karpachevskiy and B. N. Aleksandrov for help in the preparation of the sample. There are 5 figures and 13 references: 5 Soviet, 6 American, 1 British, and 1 Dutch.

ASSOCIATION: Fiziko-tekhnicheskiy institut Akademii nauk Ukrainskoy SSR (Physicotechnical Institute of the Academy of Sciences of the Ukrainskaya SSR)

SUBMITTED: January 12, 1960

Card 4/4

BEZUGLYY, P.A.; GALKIN, A.A.

Anisotropy of the energy slit in tin in the plane of the binary axes of a crystal. Zhur. eksp. i teor. fiz. 39 no.4:1163-1164 O '60. (MIRA 13:11)

(Tin crystals)

BEZUGLY, P.A., GALKIN, A.S., PUSHKIN, A.I.

"Magnetoacoustic oscillations and fermi surface in aluminum."

Report submitted for the 8th Intl. conference on Low Temperature Physics
London, England, 16-22 Sep 1962

BEZUGLYY, P.A.; GALKIN, A.A.; PUSHKIN, A.I.; KHOMCHENKO, A.I.

Magnetoacoustic resonance in alumimum. Zhur.eksp.i teor.fiz. 42 no.1:84-85 Ja '62. (MIRA 15:3)

1. Fiziko-tekhnicheskiy institut nizkikh temperatur AN Ukrainskoy SSR.
(Nuclear magnetic resonance and relaxation) (Aluminum)

L 10725-65 EWT(l)/EWT(m)/EWP(b) IJP(c)/ESD(t)/ESD(gs)/ASD(a)-5 JD

ACCESSION NR: AP4046394 S/0056/64/047/003/0825/0835

AUTHORS: Bezugly*y, P. A.; Galkin, A. A.; Zhevago, S. E.

TITLE: Investigation of the Fermi surface in gallium on the basis of magneto-acoustic effects

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 47, no. 3, 1964, 825-835

TOPIC TAGS: gallium, Fermi surface, magnetoacoustic effect, ultrasound absorption, absorption coefficient

ABSTRACT: This work was intended to determine the topology of the constant-energy surfaces of gallium from the oscillations of the ultrasonic absorption coefficient in a magnetic field. The existing experimental data are inadequate to serve as a basis for comparison with the present model of the Fermi surface for gallium. For this purpose, the anisotropy of magnetoacoustic oscillations in gallium

Card 1/3

single crystals was measured for a sound wave vector aligned along the a and c axes, at a temperature 4.2K, a longitudinal ultrasonic frequency 200 Mcs, and magnetic field strengths up to 500 Oe. The pulse technique described by A. A. Galkin and A. P. Korolyuk (PTE, no. 6, 199, 1960) was used, and some of the measurements were made at 1.9K. The results show that for a given sound wave direction there are two principal types of absorption-coefficient oscillations, short-period (type A) in fields above 100 Oe, and long-period (type B) in the 20--2,000 Oe range. A third type (C) is also observed at narrow angles (52--60°). The values of the observed periods and the character of their anisotropy are in qualitative agreement with the individual regions of the Fermi surface of the 7th, 8th, and 9th electron bands, constructed in the nearly free electron approximation. The causes of the observed discrepancies are discussed. "The authors thank I. O. Kulik for valuable discussions, B. N. Aleksandrov for preparing the samples, and N. S. Kharchenko for performing x-ray studies of the samples." Orig. art. has: 8 figures, 1 formula and

L 10725-65

ACCESSION NR: AP4046394

1 table.

ASSOCIATION: Fiziko-tekhnicheskiy institut nizkikh temperatur Akademii nauk SSSR (Physicotechnical Institute of Low Temperatures, Academy of Sciences SSSR)

SUBMITTED: 01Apr64 ENCL: 00

SUB CODE: SS, GP NR REF SOV: 004 OTHER: 008

Card 3/3

L 34954-65 EWT(l)/EWT(m)/EEC(t)/EWP(t)/EWP(b) Pab IJP(c) JD

ACCESSION NR: AP5005287 S/0181/65/007/002/0480/0484

26
25
B

AUTHOR: Bezuglyy, P. A.; Galkin, A. A.; Zhevago, S. Ye.

TITLE: Investigation of magnetoacoustic effects in gallium at 210 Mc

SOURCE: Fizika tverdogo tela, v. 7, no. 2, 1965, 480-484

TOPIC TAGS: gallium, magnetoacoustic effect, Fermi surface, single crystal, ultrasound propagation, electron structure

ABSTRACT: Results are reported of an experimental investigation of magnetoacoustic effects in single-crystal samples of gallium, using longitudinal 210 Mc ultrasound in a transverse field with the wave vector parallel to the b-axis of the crystal, and in a longitudinal field with the wave vector perallel to each of the three principal axes. The same procedure and the same gallium samples were used in earlier research by the authors (ZhETF v. 47, 825, 1964), except that a different pair of quartz converters was used to obtain the 210 Mc frequency. All experiments were made at 4.2K. The results show that when the sound propagates along the b-axis of the crystal, the period of oscillations

Card 1/3

L 21954-65

ACCESSION NR: AP5005287

reaches a maximum value (1.5×10^{-2} Oe^{-1} when the field is parallel to c) and decreases smoothly as the angle between the magnetic field and the a-axis decreases. Only two or three oscillations are observed in the entire angle interval, so that the accuracy with which the oscillation periods are determined is quite low. The oscillations themselves are irregular. The results do not agree with the previously published description of the central section of the 9th electron zone, and no check on the latter could be made because of lack of data at small angles and the small number of oscillations. In the case of a longitudinal magnetic field with the sound wave vector parallel to the a-axis, resonant oscillations were observed in the absorption coefficient, showing that the dispersion deviates greatly from quadratic. A distinguishing feature of these oscillations is, first, that the maxima on the absorption curve are considerably sharper than the minima, and that the relative widths of the maxima do not depend on the numbers of the maxima. Furthermore, the amplitude of each succeeding maximum decreases. All these results are likewise in disagreement with the forms given by the nearly-free-electron model for the Fermi surfaces. Orig. art. has: 5 figures and 3 formulas. [02]

Card 2/3

L 3495[illegible]

ACCESSION NR: AP5005287

ASSOCIATION: Fiziko-tekhnicheskiy institut nizkikh temperatur AN UkrSSR, Khar'kov (Physicotechnical Institute of Low Temperatures, AN UkrSSR)

SUBMITTED: 23Jul64	ENCL: 00	SUB CODE:	SS, EM
NO REF SOV: 003	OTHER: 005	ATD PRESS:	3214

Card 3/3

BEZUGLYY, P.A.; ZHEVAGO, S.Ye.; DENISENKO, V.I.

Magnetoacoustic study of the Fermi surface in molybdenum.
Zhur.eksp. i teor.fiz. 49 no.5:1457-1462 N '65.
(MIRA 19:1)

1. Fiziko-tekhnicheskiy institut nizkikh temperatur AN UkrSSR.

BEZUGLYY, P.A.; YEREMENKO, V.V.; KUKUSHKIN, L.S.; KULIK, I.O.; MANZHELIY, V.G.; PERESADA, V.I.; PESCHANSKIY, V.G.; POPOV, V.A.; SHISHKIN, L.A.

Conference on the physics of the condensed state. Usp. fiz. nauk 88 no.2:387-393 F '66. (MIRA 19:2)

1. Fiziko-tekhnicheskiy institut nizkikh temperatur AN UkrSSR.

BEZUGLYY, P.A. [Bezuhlyi, P.A.]; BURMA, N.G. [Burma, M.H.]; BUTENKO,T.F.; MINYAFAYEV, R.Kh. [Miniafaiev, R.Kh.]

Determining the elastic constants of solid ammonia in the temperature range of 180° - 77°K. Ukr. fiz. zhur. 10 no. 11: 1251-1257 N '65. (MIRA 18:12)

1. Fiziko-tekhnicheskiy institut nizkikh temperatur AN UkrSSR, Khar'kov.

L 15671-66 EWT(1)

ACC NR: AP6000201 SOURCE CODE: UR/0056/65/049/005/1457/1462

AUTHOR: Bezuglyy, P. A.; Zhevago, S. Ye.; Denisenko, V. I.

ORG: Physicotechnical Institute of Low Temperatures, Academy of Sciences, UkrSSR (Fiziko-tekhnicheskiy institut nizkikh temperatur Akademii nauk UkrSSR)

TITLE: Magnetoacoustic investigation of the Fermi surface of molybdenum

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 49, no. 5, 1965, 1457-1462

TOPIC TAGS: molybdenum, magnetoacoustic effect, single crystal, magnetic anisotropy, transverse magnetic field, acoustic wave, electromagnetic wave oscillation

ABSTRACT: In view of the fragmentary experimental data published so far on the magnetoacoustic effects in molybdenum, the authors investigated this effect in greater detail by studying the anisotropy of the oscillation periods of the geometrical resonance in transverse magnetic fields when the acoustic wave vector was oriented along the principal crystallographic directions of a single-crystal sample of molybdenum. The measurements at 200 Mc frequency and 4.2K used the pulse procedure of A. A. Galkin and A. P. Korolyuk (PTE, no. 6, 199, 1960). The temperatures were 1.8K in the case of q ∥ [100] and 4.2K in the case q ∥ [110] and [111]. The results showed that in different angle ranges, three different oscillation periods are observed in the absorption coefficient, one short-period and two long-period. It is shown that the short-period oscillations, observed for q ∥ [100], give the dimensions of the electronic surface, while the long-period oscillations are associated

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ACC NR: AP6000201

with the small hole zones, in accordance with the model proposed by W. H. Lomer (Proc. Phys. Soc., v. 84, 327, 1964). The maximum dimensions of the hole regions are 0.56×10^8 cm^{-1} and the minimum 0.42×10^8 cm^{-1}. Orig. art. has: 6 figures and 1 formula.

SUB CODE: 20,11/ SUBM DATE: 24Jun65/ ORIG REF: 002/ OTH REF: 011

Card 2/2

[illegible], I.A.; FIL', V.M.; SHEVCHENKO, O.A.

Nonlinear effects in ultrasound absorption in superconducting indium. Zhur.eksp. i teor.fiz. 49 no.6:1715-1717 D '65. (MIRA 19:1)

1. Fiziko-tekhnicheskiy institut nizkikh temperatur AN UkrSSR.
Submitted June 28, 1965.

APPROVED FOR RELEASE: 06/08/2000 CIA-RDP86-00513R000205210016-4"

L 25693-66 EWT(1)/EWT(m)/T/EWP(t)/EWP(k) IJP(c) JD

ACC NR: AP6002708 SOURCE CODE: UR/0056/65/049/006/1715/1717

AUTHOR: Bezuglyy, P. A.; Fil', V. D.; Shevchenko, O. A.

ORG: Physicotechnical Institute of Low Temperatures, Academy of Sciences UkrSSR (Fiziko-tekhnicheskiy institut nizkikh temperatur Akademii nauk UkrSSR)

TITLE: Nonlinear effects in the absorption of ultrasound in superconducting indium

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 49, no. 6, 1965, 1715-1717

TOPIC TAGS: ultrasonic absorption, indium, superconductivity, critical point, crystal dislocation phenomenon, single crystal, magnetic field, crystal anisotropy

ABSTRACT: In view of new self-absorption mechanisms recently discovered to operate in the superconducting state (R. E. Love and R. M. Show, Rev. Modern Phys. v. 36, 260, 1964) wherein a strongly marked nonlinearity appears in the sound absorption below the critical temperature, the authors report observation of similar effects in indium. The absorption of longitudinal sound at frequencies 115, 160, and 210 Mc/sec was investigated in single crystals of indium with orientations (100), (110), and (111). The crystals were prepared by the procedure of YU. V. Sharvin and V. F. Gantmakher (PTE, No. 6, 165, 1963). The measurements were made at temperatures 4.2--1K. The observed dependence of the absorption of the ultrasonic wave on the amplitude of the sound field disappeared when a magnetic field sufficiently strong to destroy superconductivity was applied. An analysis of the data shows the results to be in qualitative

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ACC NR: AP6002708

agreement with the model of A. Granato and K. Lucke (J. App. Phys. v. 27, 583, 1956) for the amplitude-dependent absorption of ultrasound by dislocations. Most dislocations were found to be growth dislocations. Research is planned on the possibility of separating the electronic part of the absorption in its pure form and determination of the anisotropy of the energy gap, which preliminary estimates show to be lower than obtained from the present data. Orig. art. has: 2 figures.

SUB CODE: 20/ SUBM DATE: 28Jun65/ ORIG REF: 001/ OTH REF: 004

Card 2/2

BEZUGLYY, S., kand. khim. nauk

Prospects for the production of various forms of pesticides. Zashch. rast. ot vred. i bol. 10 no.3:9-11 '65. (MIRA 19:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut khimicheskikh sredstv zashchity rasteniy.

BEZUGLYY, S.D.

Polarographic determination of naphthalene in coking gas.

naphthalene.

BEZUGLYĬ, S. F.

Plastic-viscous properties of an adhesive of the "tangle-foot" type for protection against caterpillars. S. F. Bezuglyĭ. *J. Applied Chem.* (*U.S.S.R.*) 19, 79-80 (1946).—The adhesive manufd. in U.S.S.R. on the base of a formulation of phenolic resins, castor oil, beeswax, and Na and Ca oleates (no figures given) was studied by the rotating-cylinder method as to the plastic properties. The adhesive behaves, within a few %, according to Bingham's equation for plastic viscous flow (cf. *C.A.* 16, 2117); the temp. range studied was 18–55°. The effects of the addn. of oleates (2.8 to 8%) also were studied; a particularly high stabilizing effect is secured with Na oleate, while Ca oleate produces good plastic-viscous properties.

G. M. Kosolapoff

BEZUGLYY, S. F. Cand. Chem. Sci.

Dissertation: "Investigation of the Plastic and Viscous Properties of Caterpillar Glues in Connection with the Development of Method for their Production." Sci Res Inst of Fertilizer and Insectofungicides imeni Ya. V. Samoylov, 11 Apr 47.

SO: Vechernyaya Moskva, Apr, 1947 (Project #17836)

BEZUGLYY, S. F.

USSR/Chemistry - Insecticides FD-505

Card 1/1 : Pub. 50-4/23

Authors : Bezuglyy, S. F., Cand. Chem. Sci., and Shogam, S. M., Cand. Chem Sci

Title : Some physico-chemical properties of insecticide emulsions and insecticide dusts

Periodical : Khim. prom., 272-278 (16-22), Jul/Aug 1954

Abstract : Reviews on the basis of USSR work the properties of emulsions and dusts containing DDT, hexachlorocyclohexane, thiophos, and chlorten (chlorinated turpentine or chlorinated alpha-pinene fraction). Describes procedures for the production of these emulsions and dusts. Twenty two references; 20 of them USSR, all since 1940. Three graphs.

Institution : Scientific Research Institute of Fertilizers and Insectofungicides.

Submitted :

BEZUGLYY, S.F.

Studies on concentrated insecticidal emulsions of DDT and hexachloro-cyclohexane. [Trudy] NIUIF no.156:90-129 '55.
(MLRA 9:10)

(DDT (Insecticide)) (Benzene hexachloride)

BEZUGLYY, S.F.

Colloidal stability of homogenized DDT and hexachloro-cyclohexane emulsions. [Trudy] NIUIF no.156:139-146 '55. (MLRA 9:10)

(DDT (Insecticide)) (Benzene hexachloride)

BEZUGLYY, S.F.

Adsorption of sulfite liquor in DDT emulsions. [Trudy] NIUIF no.156:147-154 '55. (MLRA 9:10)

(DDT (Insecticide)) (Sulfite liquor) (Adsorption)

BEZUGLYY, S.F.

Concentrated emulsion of anthracene oil. [Trudy] NIUIF no.156: 129-138 '55. (MLRA 9:10)

(Anthracene oil) (Insecticides)

BEZUGLYY, S.F.

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Wettable DDT and hexachlorocyclohexane powders. S. F. Bezuglyĭ, B. A. Akimov, V. Ya. Mornet, and Yu. E. Ryskin. U.S.S.R. 108,559, July 25, 1957. To obtain insecticide powders which form stable suspensions, the insecticide is ground in the presence of 5% sulfite liquor alc. lees. To prevent caking of the finely ground powders, to the mass being ground is added 3% of a surface-active substance. Alkylphenyl ethers of polyethylene glycol, sulfonates, sulfonated high-mol. alcs., or Na alkylnaphthalene sulfonates are used. Techn. DDT, tech. or enriched hexachlorocyclohexane contg. not less than 23% of the γ-isomer, its tech. γ-isomer, or a mixt. of DDT with hexachlorocyclohexane is used as the insecticide. M. Hosch

BEZUGLYI, S.F.

2

Insecticidal preparation. S. F. Bezuglyi and B. A. Akimov. U.S.S.R. 106,830, Aug. 25, 1957. To an insecticide compn. contg., e.g., chlorinated terpenes, chlordan, and heptachlor, a mixt. of surface-active substances, such as poly(ethylene glycolates) or Sulfonol, is added to make the powders wettable and to form stable aq. suspensions. Ca lignosulfonate is added to act as stabilizer and kaolin as filler. M. Hosch

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5(1), 30(1) SOV/64-59-6-9/28

AUTHORS: Bezuglyy, S. P., Candidate of Chemical Sciences, Akimov, B. A.

TITLE: Wettable Insecticidal, Acaricidal, and Herbicidal Powders for Use in the Form of Aqueous Suspensions

PERIODICAL: Khimicheskaya promyshlennost', 1959, Nr 6, pp 494-499 (USSR)

ABSTRACT: Part of the present investigation was made with the aid of N. Ya. Momot and Yu. Ye. Bryskin. A method for the preparation of concentrated powders on the basis of DDT (30-50%), hexachlorocyclohexane (50%), sulfonate ester (30-80%), and other agents with additions of the surface-active substances OP-7 or OP-10 and spent sulfite spirit lye was developed. The experimental grinding was done by means of vibratory, ball, and blast mills. On the basis of the experimental results concerning the influence of the addition of OP-10 upon the degree of dispersion of the sulfonate ester powder (Table 1) as well as the effect of spent sulfite spirit lye upon the stability of the suspension in water (Table 2) the following formula is given:

commercial sulfonate ester	30
powdered spent sulfite spirit lye	2-5
OP-10 or OP-7	2-3
kaolin	62-66

Wettable Insecticidal, Acaricidal, and Herbicidal Powders for Use in the Form of Aqueous Suspensions

From the scheme of the unit MV-200-1.5 (Fig 1) it can be seen that a portioning balance DM-100 is used. The results (Fig 2) of the sedimentation analysis by means of Figurovskiy's balance (Ref 4) as well as the degree of dispersion of the powders on the basis of sulfonate ester (Table 3) show that in this case both intermittent and continuous grinding in ball mills gives identical results. F. A. Drannikova, G. A. Fedorov (VNIITISM) and V. G. Antonova (NIUIF) participated in the grinding experiments conducted on a vibratory mill M10-3. Powders on the basis of DDT (30%) were produced (Table 4, data of intermittent grinding, table 5, data of continuous grinding, table 6, test results of the powders), and it was found that continuous grinding should be avoided because of excessive warming. Some physicochemical data of the powders obtained (Table 7) as well as of powders on the basis of chlorinated terpenes (Table 8) are given. There are 1 figure, 8 tables, and 7 Soviet references.

ASSOCIATION: Nauchnyy institut po udobreniyam i insektofungitsidam imeni Ya. V. Samoylova (Scientific Institute of Fertilizers and Insectofungicides imeni Ya. V. Samoylov)

BEZUGLYY, S.F.; LITVINOVA, A.F.; POKROVSKIY, Ye.A.

Physicochemical investigations of insecticidal emulsions and solutions with emulsifiers in order to improve the methods for preparing the above form of insecticides. [Trudy] NIUIF no.164: 29-31 '59. (MIRA 15:5)
(Insecticides)

BEZUGLYY, S.F.; AKIMOV, B.A.; POPOV, P.V.; UKRAINETS, N.S.; BOCHAROVA, L.P.

Physicochemical investigations of the wettable powders of different insecticides in order to improve the methods of their production. [Trudy] NIUIF no.164:32-34 '59. (MIRA 15:5)
(Insecticides)

BEZUGLYY, S.F.; SARISHVILI, I.G.; LUKANINA, V.S.; POKROVSKIY, Ye.A.; UNTERBERGER, V.K.

Investigation of the chemical stability of mineral oils and oil fractions and development of nonphytocidal emulsions based on them for controlling pests of citrus and other fruit cultures. [Trudy] NIUIF no.164:34-35 '59. (MIRA 15:5)
(Insecticides)

REZUGLYY, S.F.

Developing the technology of 50 per cent emulsion pastes of DDT and introducing their production. [Trudy] NIUIF no.165:4-8 '59.
(MIRA 13:8)

(DDT (Insecticide))

BEZUGLYY, S.F.; AKIMOV, B.A.; MOMOT, V.Ya.; BRYSKIN, Yu.Ye.

Wetting powders of DDT (30 per cent) and principles of their production. [Trudy] NIUIF no.165:9-14 '59. (MIRA 13:8)

1. Predpriyatiye khimicheskoy promyshlennosti (for Momot, Bryskin).
2. Nauchnyy institut po udobreniyam i insektofungitsidam im. Ya.V. Samoylova (for Bezuglyy, Akimov).
(DDT (Insecticide))

BEZUGLYY, S.F.; AKIMOV, B.A.; ANTONOVA, V.G.; DRANNIKOVA, F.A.

DDT wetting powders prepared by vibration grinders. [Trudy] NIUIF no.165:15-20 '59. (MIRA 13:8)

1. Nauchnyy institut po udobreniyam i insektofungitsidam im.Ya.V. Samoylova (for all except Drannikova). 2. Vsesoyuznyy nauchno-issledovatel'skiy institut novykh problem stroitel'nykh materialov na baze tonkogo izmel'cheniya (for Drannikova).
(DDT (Insecticide))

BEZYGLYY, S.F.; AKIMOV, B.A.; ANTONOVA, V.G.

Wetting powders of sulfonate esters for use in water suspensions.
[Trudy] NIUIF no.165:21-31 '59. (MIRA 13:8)
(Sulfonic acids)

BEZUGLYY, S.F.; KALASHNIKOVA, V.N.

Method of determining gamma-isomers in concentrated mineral and butyrous emulsions of GKhTsG. [Trudy] NIUIF no.165:32-35 '59. (MIRA 13:8)

(Insecticides)

BEZUGLYY S.F.; SARISHVILI, I.G.

Research in the chemical composition of petroleum oils with the object of using them in insecticides. [Trudy] NIUIF no.165:78-87 '59. (MIRA 13:8)

(Petroleum--Analysis)

[redacted]

BEZUGLYY, S.F., kand.khimicheskikh nauk

Principal methods of using pesticides. Zhur. VKHO 5 no. 3:291-306 '60. (MIRA 14:2)

(Pesticides)

BEZUGLYY, S.F.; LITVINOV, A.F.

Preparing a 50% combined DDT and hexachlorocyclohexane emulsion-paste. [Trudy] NIUIF no.171:92-96 '61. (MIRA 15:7)
(DDT (Insecticide)) (Benzene hexachloride)

BEZUGLYY, S.F.; LITVINOVA, A.F.

Kinetics of structure formation in the 50% DDT paste. [Trudy] NIUIF no.171:97-102 '61. (MIRA 15:7)
(DDT (Insecticide))

BEZUGLYY, S.F.; LUKANINA, V.S.

Petroleum oil emulsion (preparation No.30) for summer spraying of fruit trees against the San Jose scale. [Trudy] NIUIF no.131:103-110 '61. (MIRA 15:7)
(San Jose scale) (Petroleum products)
(Insecticides)

BEZUGLYY, S.F., kand.khim.nauk; AKIMOV, B.A.; ANTONOVA, V.G.

Comminution of concentrated pesticide wetting powders in an air-jet mill. Khim.prom. no.9:695-697 S '62. (MIRA 15:11)

1. Nauchno-issledovatel'skiy institut po udobreniyam i insektofungisidam imeni Samoylova.

(Pesticides)